



Gel Nucleotide sequences for [] ? Site search [] ?



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InterPro

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InterPro DNA mismatch repair protein

[?] = help

IPR002099 Matches: 147 proteins

DNA_mis_repair View matches: [Overview] [sorted by Name] [of known structure] [Detailed view] [Table view]

Name [?] DNA mismatch repair protein

Signatures [?] PF01119;DNA_mis_repair (147 proteins)
PS00058;DNA_MISMATCH_REPAIR_1 (179 proteins)
TIGR00585;null (124 proteins)

Type [?] Family

Dates [?] 1999-10-08 17:07:25.0 (created)
2001-07-03 14:39:47.0 (modified)

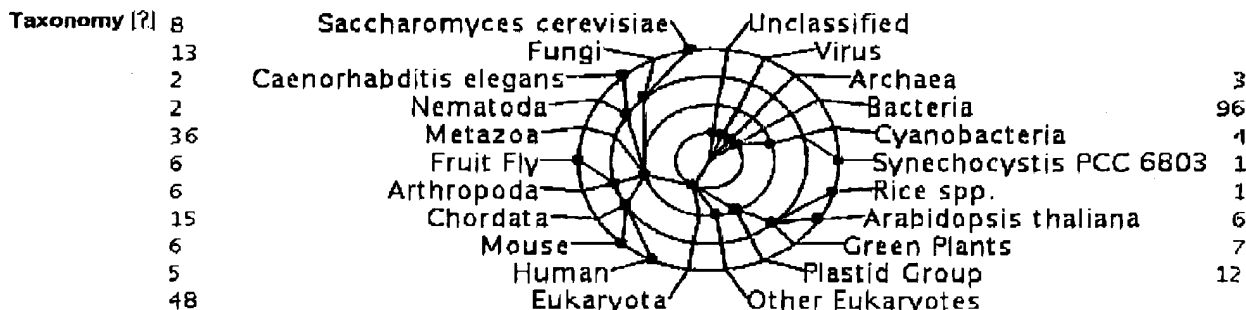
Contains [?] IPR003594; ATP-binding region, ATPase-like

Process [?] mismatch repair (GO:0006298)

Abstract [?] Mismatch repair contributes to the overall fidelity of DNA replication. It involves the correction of mismatched base pairs that have been missed by the proofreading element of the DNA polymerase complex [1]. The sequence of some proteins involved in mismatch repair in different organisms have been found to be evolutionary related.

Structural links PDB 1b62, 1bkn, 1gg6, 1hzs
[?] CATH 3.30.230.10.4, 3.30.565.10
SCOP d.122.1.2, d.14.1.3

Database links Blocks IPR002099
[?] PROSITE doc PDOC00057



Examples

P54280




PMS1_SCHPO

Yeast protein PMS1



P54279	PMS2_MOUSE	Mouse protein PSM2
P14161	MUTL_SALTY	mutL bacterial protein
P14160	HEXB_STRPN	Streptococcus pneumoniae hexB protein
P40692	MLH1_HUMAN	Human protein MLH1

[More proteins...](#)






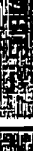


[IPR002099](#) DNA mismatch repair protein 
[IPR003594](#) ATP-binding region, ATPase-like 
SuperFamily 

Publications

1. Modrich P.
DNA mismatch correction.
Annu. Rev. Biochem. 56: 435- 466 (1987) [[PubMed: 3304141](#)]
2. McIntyre C.A. , Mankovich J.A. , Walker G.C.
Nucleotide sequence of the Salmonella typhimurium mutL gene required for mismatch repair: homology of MutL to HexB of Streptococcus pneumoniae and to PMS1 of the yeast Saccharomyces cerevisiae.
J. Bacteriol. 171: 5325- 5331 (1989) [[PubMed: 2876972](#)]
3. Prudhomme M. , Claverys J.-P. , Mejean V. , Martin B.
Nucleotide sequence of the Streptococcus pneumoniae hexB mismatch repair gene: homology of HexB to MutL of Salmonella typhimurium and to PMS1 of Saccharomyces cerevisiae.
J. Bacteriol. 171: 5332- 5338 (1989) [[PubMed: 2676973](#)]
4. Bronner C.E. , Godwin A.R. , Tannergard P. , Linblom A. , Bollag R.J. , Lipford J. , Warren G. , Earibino C. , Kar e M. , Lescoe M.K. , Kolodner R.D. , Smith L.G. , Fishel R. , Morrison P.T. , Baker S.M. , Nordenskjold M. , Liskay R.M. , Ward D.C.
Mutation in the DNA mismatch repair gene homologue hMLH1 is associated with hereditary non-polyposis colon cancer.
Nature 368: 258- 261 (1994) [[PubMed: 8145827](#)]

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     		SEQUENCE: Sequence 1 CRC64: 2A5289C333C7D8AA LENGTH: 724 aa	
InterPro IPR002099 Family 	DNA mismatch repair protein PFAM PF01119 DNA mismatch repair protein, C-termina TIGRFAMs TIGR00585 multi: DNA mismatch repair protein Muhl PROSITE PS00058 DNA_MISMATCH_REPAIR_1		
Parent	no parent		
Children	no children		
Found In	no entries		
Contains	IPR003594		
GO terms	Biological Process: mismatch repair (GO:0006298)		
InterPro IPR003594 Domain 	ATP-binding region, ATPase-like PFAM PF02518 Histidine kinase-, DNA gyrase B-, and SMART SM00387 Histidine kinase-like ATPases		
Parent	no parent		
Children	IPR004358 IPR010194		
Found in	IPR001241 IPR001404 IPR002099 IPR005467 IPR005734 IPR006290 IPR008358 IPR010193		
Contains	no entries		
GO terms	Molecular Function: ATP binding (GO:0005524)		
noIPR unintegrated	unintegrated PD000740		

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	PRODOM	PD018003 Q8S2D3_EEEEE_Q8S2D3	e-153 [347-625]T
	PRODOM	PD393849 Q8S2D3_EEEEE_Q8S2D3	2e-35 [626-713]T
	PRODOM	PD641161 Q9BIX4_EEEEE_Q9BIX4	2e-11 [209-214]T
	PRODOM	PD673298 Q8S2D3_EEEEE_Q8S2D3	6e-26 [215-273]T
	PIR	PIRSF006464 no name	0 [1-724]T
	SUPERFAMILY SSF54211	Ribosomal protein S5 domain 2-like	7.7e-34 [225-349]T
	SUPERFAMILY SSF55874	ATPase domain of HSP90 chaperone/DNA topoisomerase II/histidine kinase	5.2e-34 [14-224]T
Parent	no parent		
Children	no children		
Found in	no entries		
Contains	no entries		
GO terms	none		

Picture View

Raw Output

XML Output

Original Sequence

FASTA Sequence

Sequence Logo

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